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## AGRICULTURE AND RURAL ECONOMICS DIVISION

The Affordability of Urban and Rural Rental Housing. By Donald L. Lerman. Staff Report No. AGES850515. Dec. 1985. 28 pp. $9.95 paper copy.

This report compares rent-to-income ratios for metropolitan and nonmetropolitan rental households, controlling for income and other demographic characteristics. At the mean income level of approximately $12,000 for the sample, metro households pay approximately 4.5 percent more of their income on rent than do nonmetro renters of similar demographic characteristics. This differential falls to 3.3 percent after one adjusts for differences in urban/rural purchasing power, and it falls to 1.9 percent after one also controls for the quantity of housing consumed. This 1.9-percent rent-to-income differential results solely from differences in the price of housing in metro versus nonmetro areas.

Impacts of Foreign Trade, Automation, and Comparative Advantage on Manufacturing Employment Changes, 1975-80. By John A. Kuehn and Curtis H. Braschler. Staff Report No. AGES850730. Oct. 1985. 24 pp. $9.95 paper copy.

A modified shift-share analysis for 1975-80 indicated that (1) 122,000 total net manufacturing jobs were lost to foreign trade; (2) automation accounted for about 1.8 million job losses; (3) apparel, leather, and motor vehicle industries lost many jobs to foreign trade; (4) the Great Lakes region lost many jobs to the South Atlantic, Southwest, and Far West regions; and (5) gains in nonmetropolitan areas were mainly in low-growth industries.

## INTERNATIONAL ECONOMICS DIVISION

Assessment of the Soviet Food Program. By Robert B. Koopman. Staff Report No. AGES860109. Feb. 1986. 32 pp. $9.95 paper copy.

The Soviet food program, officially introduced in 1982, has had no significant impact on Soviet agriculture. Rising production costs and slow growth in per capita production of many agricultural products remain the rule today. Poor coordination and cooperation between agriculture and its related sectors continue. Prospects for improvement in production depend upon short-term, nonsystemic factors rather than dramatic changes in the basic Soviet system under which agriculture operates.

Consortium on Trade Research, Agriculture, Trade, and Development: A Comparative Look at U.S., Canadian, and European Community Policies. T. Kelley White and Charles E. Hanrahan, eds. Staff Report No. AGES850208. Jan. 1986. 188 pp. $16.95 paper copy.

This report contains edited versions of papers and discussions presented at the sixth meeting of the Trade Research Consortium at Airlie House, Virginia, December 16-18, 1982. This meeting of the Trade Research Consortium focused on a comparison of the domestic and trade policies of the United States, Canada, and the European Economic Community (EEC), and the effects of these policies on world markets, world price stability, and the

interaction between these developed market economies and the Third World. A paper was presented for each of the three countries or regions on each of three topics: (1) Government Policy in Support of Domestic Agriculture: Cost and Benefits; (2) Trade Policy, Commercial Market Relationships, and Effects on World Price Stability; and (3) Relations with the Third World: Views on the North-South Dialogue and Food Security. The set of papers provides an illuminating view of the differences and similarities among the United States, Canada, and the European Economic Community in the treatment of their domestic agricultural sectors and the interface between the agricultural sector of each country and commercial world markets as well as the Third World countries.

An Econometric Analysis of the World Wheat Market and Simulation of Alternative Policies, 1960-80. By Maurice W. Schiff. Staff Report No. AGES850827. Oct. 1985. 76 pp. $11.95 paper copy.

Neither accurate information on the Soviet Union's 1971 agricultural policy change nor charging a higher price for 1972 Soviet wheat purchases by eliminating the U.S. export subsidy would have had significant effect on the 1972-74 wheat price increase, according to this empirical study. World free trade would have increased the world price by 15 percent and reduced its variability by more than 40 percent. Free trade in the European Community (EC) would have increased the world price by 17 percent and reduced its variability by more than 25 percent; the welfare loss due to misallocation of resources associated with the EC's Common Agricultural Policy amounts to about 17 percent of the increase in income for farmers in EC member nations. The author reached these conclusions based on a multiregional world wheat model for the period 1960-80 and a simulation of alternative agricultural policies.

Egyptian Feedlot Practices, Costs, and Returns. By Shahla Shapouri, T. Kelley White, and Hassan Khedr. Staff Report No. AGES851101. Dec. 1985. 48 pp. $9.95 paper copy.

A survey of feedlot farms in Egypt shows important variations in operational characteristics, costs, and returns among regions, different sizes of operation, and management systems. Overall, the degree of feedlot utilization was low, less than 70 percent of capacity. Weight gain per day for local breed was lower than for foreign and crossbreeds (1 to 15 percent). Budget analysis showed that the return to average producers covers variable costs and leaves a margin to fixed factors and management, especially for private feedlots. Differences in farm management decisions, on types and weights of animals entering and leaving feedlots, and types of feed ration had a significant effect on costs and returns to farmers.

GTP: A Microcomputer Program for the Spatial Equilibrium Problem. By Forrest D. Holland. Staff Report No. AGES850514. Oct. 1985. 60 pp. $11.95 paper copy.

Competitive, spatial price equilibrium models have been used extensively by international agricultural trade economists as research and policy analysis tools. These mathematical models of international trade are solved on large mainframe computers. It has become feasible to solve small spatial price

equilibrium models with microcomputers. This report describes a microcomputer program designed to solve small, single commodity spatial equilibrium models. The program, GTP (Generalized Transportation Problem), was developed on an IBM PC-XT personal computer, but it should run on most microcomputers based on the 8086 and 8088 microprocessors.

The New Economic Mechanism in Bulgarian Agriculture. By Nancy Cochrane. Staff Report No. AGES851121. Jan. 1986. 40 pp. $9.95 paper copy.

A set of economic reforms called the New Economic Mechanism (NEM) was introduced in Bulgaria in 1979 in an attempt to reverse a decade of slowing production growth and escalating costs. The NEM was intended to spur productivity increases by decentralizing management, giving individual production units more control over production and input decisions, and tying enterprise income and workers' wages more closely to production results. However, in the 4 years since its implementation,the NEM has not yet been fully implemented. Decisionmaking is still highly centralized, and unprofitable firms continue to be subsidized. While production growth has been respectable, it has been achieved at great cost to the Bulgarian economy as input costs have continued to rise. Agricultural exports have not risen as fast as was hoped, and imports have increased. Imports from the United States have declined, on the other hand, and are not expected to rise much during the rest of the eighties.

## NATIONAL ECONOMICS DIVISION

Consumer Demand for Eggs and Market Implications. By James Blaylock and Clark Burbee. Staff Report No. AGES850924. Nov. 1985. 20 pp. $9.95 paper copy.

Domestic population growth and greater use of processed eggs over the past three decades offset the decline in per-capita shell egg use and left total egg consumption for domestic food purposes averaging about 5 billion dozen a year. This paper analyzes effects of prices, income, and household characteristics on the demand for eggs. Evidence from a complete demand system indicates that eggs are more price inelastic than either red meat or poultry. The own-price elasticity for eggs was found to be -0.1429. The income elasticity for eggs, derived from an analysis of the 1977-78 USDA Nationwide Food Consumption Survey, was estimated to be approximately -0.05. Region of household residence, season, race, age, and household size also influence egg consumption and expenditures.

Economic Assessment of the 1983-84 Avian Influenza Eradication Program. By Floyd A. Lasley, Sara D. Short, and William L. Henson. Staff Report No. AGES841212. Reprinted, Feb. 1986. 60 pp. $11.95 paper copy.

The 1983-84 outbreak of avian influenza brought heavy losses to the Pennsylvania and Virginia poultry industry and caused consumers to pay nearly $350 million more for poultry and meat products. Benefits of the Federal eradication program substantially exceeded its costs by limiting short-term losses and increases in costs from avian influenza to producers and consumers to less than 10 percent of what would have resulted from a widespread outbreak. Government costs for indemnities and program administration represented only about 1 percent of the probable costs to producers and consumers of a widespread outbreak.

Regional Surplus and Deficit Estimates for Broilers, Turkeys, and Eggs, 1975-84. By Edward H. Easterling and Floyd A. Lasley. Staff Report No. AGES850823. Nov. 1985. 20 pp. $9.95 paper copy.

Population growth patterns and shifts in poultry production during the past 10 years caused major changes in the regional supply-consumption balances for poultry products. The South continues increasing its share of both broilers and turkeys. However, the southward movement of egg production peaked in 1979-80 and has now reversed itself, with rapid expansion in the East North Central region. More broiler and turkey meat but fewer eggs are being shipped between regions.

U.S. Cotton Production Practices and Costs. By W.C. McArthur, F.T. Cooke, Jr., R.D. Krenz, and G.D. Garst. Staff Report No. AGES850422. Oct. 1985. 52 pp. $11.95 paper copy.

This report summarizes cotton production practices and costs in the United States. Results show marked regional differences in cotton production practices and costs. Fertilizer and chemical inputs are major components of total cash expenses for producing cotton in the Southeast. Chemical inputs and irrigation are major cost items for cotton in the West. Most of the data were obtained from a survey of cotton producers in the major cotton producing regions.

U.S. Grain Sorghum Production Practices and Costs. By Warren R. Grant and Ronald D. Krenz. Staff Report No. AGES851024. Nov. 1985. 76 pp. $11.95 paper copy.

This report, summarizing information on grain sorghum production in the United States for 1982 and 1983, shows marked regional differences in production practices and costs. Fertilizer and chemical inputs are major components of total cash expenses for producing grain sorghum in all areas. Irrigation is a major cost item for grain sorghum in all irrigated areas.

## NATURAL RESOURCE ECONOMICS DIVISION

Analysis of Irrigation Potential in the Southeast: Florida, A Special Report. By Rajinder Singh Bajwa. Staff Report No. AGES851021. Nov. 1985. 52 pp. $11.95 paper copy.

The doubling of population in Florida between 1960-80 brought about increasing demands for water by agricultural and urban-industrial activities. Irrigated acreage remained highly concentrated in the central counties around Lake Okeechobee, where climatic factors are especially conducive to the production of specialty crops such as citrus, vegetables, tropical fruits, and sugarcane. Prolonged drought during the early 1960's stimulated significant growth in the region's irrigated acreage. In recent years, other U.S. regions and Mexico have provided Florida with intense competition in the market for specialty crops. Florida has 1.2 million acres of unirrigated cropland and another 1.5 million acres of pastureland in soil classes I, II, and III, which represent potential area for irrigation development.

The Derived Demand for Real Cash Balances in Agricultural Production. By Michael LeBlanc, John F. Yanagida, and Roger K. Conway. Staff Report No. AGES851025. Dec. 1985. 16 pp. $9.95 paper copy.

Implications of real cash balances as a productive input in agricultural productions are explored. A system of aggregate input demand functions for agriculture including real cash balances is formulated and estimated, assuming that producers minimize input costs for a given output level. Empirical results suggest real cash balances are an important contributor to agricultural production. Their exclusion from production studies may lead to serious specification biases. Tests herein indicate that the demand for cash balances is relatively elastic with respect to changes in the user cost of money, and that real cash balances are a substitute for machinery and capital.

Effects of Air Pollution and Acid Rain on Agriculture: An Annotated Bibliography. By Joseph R. Barse, Walter Ferguson, and Virgil Whetzel. Staff Report No. AGES850702. Oct. 1985. 188 pp. $16.95 paper copy.

Ozone and sulfur dioxide--gaseous air pollutants--can reduce the yields of key agricultural crops such as soybeans, corn, wheat, citrus fruit, cotton, and peanuts by interfering with plant photosynthesis. In general, the greater the pollutant concentration, the greater the yield reduction. Based on this biological evidence, economists are now estimating dollar impacts of ozone pollution on agriculture. By contrast, evidence on the biological impacts can be favorable, because rainfall acids contain nitrogen and sulfur--major plant nutrients. On balance, acid rain seems to be far less damaging to agriculture (if damaging at all) than the gaseous pollutants. Nevertheless, gaseous pollutants and acidity in rain both originate to a significant degree from the same or similar sources--man's pollutant emissions to the atmosphere.

Farm-Level Effects of Soil Conservation and Commodity Policy Alternatives: Model and Data Documentation. By John D. Sutton. Staff Report No. AGES860116. Feb. 1986. 56 pp. $11.95 paper copy.

This report documents a profit-maximizing linear programming (LP) model of a farm typical of a major corn-soybean producing area in the Southern Michigan-Northern Indiana Drift Plain. The model is structured to help analyze after-tax income and erosion effects of soil conservation and commodity program options on cash-grain farms having various land, labor, and financial resources.

Pesticide Assessment of Field Corn and Soybeans: Corn Belt States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524A. Dec. 1985. 36 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for field corn and soybeans in the Corn Belt. Without insecticides, corn rootworn larvae and other soil insects would cause substantial corn yield losses, and Mexican bean beetles would reduce soybean yields. The loss of seed treatments would result in yield losses to both corn and soybeans. Among the herbicides, the loss of triazines would cause the greatest corn yield losses, while either

dinitroanilines, acetanilides, or bentazon would cause the greatest soybean yield losses. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use, for insects, diseases, nematodes, and weeds.

Pesticide Assessment of Field Corn and Soybeans: Delta States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524B. Dec. 1985. 36 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for corn and soybeans in the Delta States. Without insecticides, corn rootworm larvae and other soil insects would cause substantial corn yield losses, while corn earworms or loopers would cause the greatest losses to soybeans. The loss of fungicides would result in corn yield losses from seed rots and seedling blights and soybean losses from foliar diseases. The loss of nematicides would cause soybean yield losses. Among the herbicides, the loss of triazines would cause the greatest corn yield losses, while either the phenoxys or bentazon would cause the greatest soybean yield losses. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use, for insects, diseases, nematodes, and weeds.

Pesticide Assessment of Field Corn and Soybeans: Lake States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524C. Dec. 1985. 32 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for corn and soybeans in the Lake States. Without insecticides, corn rootworm larvae and other soil insects would cause substantial corn yield losses. The loss of seed treatments would result in yield losses to both corn and soybeans. Among the herbicides, the loss of triazines would cause the greatest corn yield losses, while the loss of dinitroanilines would cause the greatest soybean yield losses. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use, for insects, diseases, nematodes, and weeds.

Pesticide Assessment of Field Corn and Soybeans: Northeastern States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524D. Dec. 1985. 36 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for corn and soybeans in the Northeast. Without insecticides, cutworms would cause the greatest corn yield losses and Mexican bean beetles the greatest soybean yield losses. Seed rots and seedling blights would cause substantial corn yield losses without pesticide control, while nematodes would reduce soybean yields. Among the herbicides, the loss of triazines would cause the greatest corn yield losses and acetanilides the greatest soybean losses. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use, for insects, diseases, nematodes, and weeds.

Pesticide Assessment of Field Corn and Soybeans: Northern Plains States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524E. Dec. 1985. 32 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for corn and soybeans in the Northern Plains. Without insecticides, corn rootworm larvae and other soil insects would cause substantial corn yield losses. The loss of seed treatments would result in yield losses to both corn and soybeans. Among the herbicides, the loss of triazines would cause the greatest soybean yield losses. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use for insects, diseases, nematodes, and weeds.

Pesticide Assessment of Field Corn and Soybeans: Southeastern States. By the National Agricultural Pesticide Impact Assessment Program (NAPIAP). Staff Report No. AGES850524F. Dec. 1985. 36 pp. $9.95 paper copy.

This report summarizes the pesticide assessment for corn and soybeans in the Southeast. Without insecticides, corn rootworm larvae and other soil insects would cause substantial corn yield losses. Corn earworms would cause the greatest losses to soybeans. The loss of fungicides would result in corn yield losses from seed rots and seedling blights. The loss of nematodes would cause substantial losses to both corn and soybeans. Among the herbicides, the loss of triazines would cause the greatest corn yield losses, while the loss of postemergence treatments, including bentazon, would cause the greatest losses in soybean yields. This report includes pest rankings, estimates of acreages treated with pesticides or other pest management practices, and estimates of pest losses with and without pesticide use, for insects, diseases, nematodes, and weeds.

Targeting Soil Erosion Control Efforts in a Critical Watershed. By William M. Park and David G. Sawyer. Staff Report No. AGES850801. Dec. 1985. 36 pp. $9.95 paper copy.

The public cost of reducing erosion in a west Tennessee watershed pilot program was 34 percent lower than the national average. The difference was attributed to the pilot program's emphasis on targeting specific erosion problems and to the establishment of permanent vegetative cover on highly eroding land. Even greater use of permanent vegetative cover, no-till cropping practices, and less reliance on cover improvement and terraces could reduce erosion in the area by an additional 32 percent with the same level of funds. A variable cost-sharing approach to erosion control may yield even bigger dividends in a targeting program.

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